

The Honorable Barbara J. Rothstein

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

WSOU INVESTMENTS, LLC,

Plaintiff,

V.

F5 NETWORKS, INC.,

Defendant.

Civil Action Nos. 2:20-cv-01878-BJR
No. 2:21-cv-00124-BJR
No. 2:21-cv-00125-BJR
No. 2:21-cv-00126-BJR

ORDER ON CLAIM CONSTRUCTION

I. INTRODUCTION

This order on claim construction addresses terms of U.S. Patent Nos. 7,953,884 (the “884 Patent”); 9,584,330 (the “330 Patent”); 8,248,940 (the “940 Patent”); and 7,548,945 (the “945 Patent”), which are owned by Plaintiff WSOU Investments LLC and which Plaintiff claims Defendant is infringing. The Court has considered the parties’ briefing and supporting materials and has held a Markman hearing in this matter.

II. BACKGROUND

The parties each submitted opening and responsive briefs describing a total of 14 disputed terms across the four patents. Dkt. Nos. 100, 101, 104, 105. The parties supported their arguments

1 during the Markman hearing with PowerPoint presentations. In many cases, the presentations
 2 contained significantly more detail than the parties' briefs. Therefore, the Court asked the parties
 3 to file those presentations, and the Court refers to them in this Order. *See* Dkt Nos. 126-29, 131-
 4 34.

5 **III. LEGAL STANDARD**

6 “The purpose of claim construction is to ‘determin[e] the meaning and scope of the patent
 7 claims asserted to be infringed.’” *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521
 8 F.3d 1351, 1360 (Fed. Cir. 2008) (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967,
 9 976 (Fed. Cir. 1995) (en banc)). To determine the meaning of claims, courts consider the claim
 10 language, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. In construing
 11 claims, the Court gives claim terms their ordinary meaning as understood by a person of ordinary
 12 skill in the art. *Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 716–17 (Fed. Cir. 1998). “In
 13 most situations, analysis of intrinsic evidence alone will resolve claim construction disputes.”
 14 *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). In some
 15 circumstances, courts may also consider extrinsic evidence, including expert and inventor
 16 testimony, dictionaries, and treatises. *Key Pharms.*, 161 F.3d at 980.

19 “When the parties raise an actual dispute regarding the proper scope of [the] claims, the
 20 court, not the jury, must resolve that dispute.” *Markman*, 52 F.3d at 979 (holding that claim
 21 construction is a matter of law). In some cases, a disputed term has a well-understood meaning
 22 and a defined scope, “and claim construction in such cases involves little more than the application
 23 of the widely accepted meaning of commonly understood words.” *O2 Micro*, 521 F.3d at 1360
 24 (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc)). However, *O2*
 25 *Micro* makes clear that if the parties raise a genuine dispute as to the scope of a term—even a term

1 with a well-understood meaning—“it is the court’s duty to resolve it.” *Id.* at 1362.

2 IV. CLAIM CONSTRUCTION

3 The parties dispute claim terms in each of the four distinct before the Court.

4 A. Patent ‘884

5 Patent ‘884 is described as “[a] system and method for resource control management
6 implementing Diameter protocol.” Dkt. No. 100-3 at ECF 2. Diameter protocol refers to a set of
7 procedures governing how devices communicate with each other over certain types of networks.
8 Diameter protocol is important to network resource management and performs the “AAA”
9 services: Authentication (who is permitted to use network resources), Authorization (what they are
10 authorized to do), and Accounting (monitoring the usage of resources). The patented technology
11 is characterized as an extension of Diameter protocol.

12 When a device connects to a network, it requires network resources. Those resources are
13 finite. If too many devices are using network resources, the network may become overloaded.
14 The patented technology was designed to improve upon existing methods of network resource
15 management by adding extensions to those methods: an audit extension and an overload extension.
16 The audit extension assesses the status of devices connected to the network and clears those that
17 are not fully connected (and are thus wasting network resources). This audit sequence is performed
18 in response to various triggers, discussed in greater detail below. If the network becomes
19 overloaded, the patented technology’s overload extension blocks a certain number of incoming
20 queries to reduce the strain on the network.

21 1. The Disputed Term: “a trigger”

22 The Court’s analysis of each term starts with the language of the claim in which it is used.
23 The relevant claim here describes the technology as “performing an audit sequence in response to

1 **a trigger**, the audit sequence includes clearing media resource ports that are not fully connected
 2 by implementing an audit extension to a Diameter protocol.” Dkt. No. 100-3 at ECF 15 (Claim
 3 11A). Plaintiff argues that no construction is necessary, but in the alternative defines the term as
 4 “a condition that when met causes a function to exercise.” Dkt. No. 104 at 1-2. Defendant
 5 contends that the term should instead be defined as “[a] [d]etected event, date or time.” Dkt. No.
 6 105 at 1-2.

7 The Court agrees with Plaintiff that limiting the definition of a “trigger” to an event, date,
 8 or time is unnecessary and potentially inaccurate. The specification lists several different
 9 examples of triggers, including: a timer, quality of service, CPU usage, and available memory.
 10 Dkt. No. 129 at 28. Although a timer going off seems to qualify as a “detected event,” the amount
 11 of CPU usage or available memory is more appropriately characterized as a condition.¹ The
 12 second half of Defendant’s proposed construction referring to a “date or time” is not found
 13 anywhere in the specification. Nor has Defendant pointed to any embodiment in which the
 14 patented technology would perform an audit sequence determined by a particular date or time. For
 15 these reasons, the Court rejects Defendant’s proposed construction and adopts Plaintiff’s
 16 alternative construction, “a condition that when met causes a function to exercise.”

17 **2. The Disputed Term: “available central processing unit memory”**

18 The relevant claim states: “wherein determining the reduction percentage is based, at least
 19 in part, on **available central processing unit memory**.” Dkt. No. 100-3 at ECF 15 (Claim 11E).

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 25 ¹ The Court understands Defendant’s argument that, with respect to triggers like CPU usage and available memory,
 the point at which usage or memory reaches a predefined limit is a discrete “event.” Dkt. No. 105 at 1. However,
 this unnecessarily abstract definition of a common term would only serve to complicate an already complicated trial.

1 Plaintiff defines the term as “memory that is available to the CPU for allocation.” Dkt. No. 104 at
 2 2. Defendant counters that the term should mean “memory directly located on the central
 3 processing unit chip.” Dkt. No. 105 at 2.

4 The Court agrees with Plaintiff. The claim refers to “available” memory, which plainly
 5 means any memory to which the CPU has access at a given time. The specific location of the
 6 memory—i.e., whether it is located directly on the CPU (“on-chip”) or on an adjacent device or
 7 component (“off-chip”)—is never discussed in the specification, suggesting that it is not relevant
 8 to the operation of the technology. The Court rejects Defendant’s assertion that “the patent draws
 9 a distinction between CPU memory and system memory.” Dkt. No. 100 at 7. Defendant’s
 10 argument is based on the “Summary of the Invention” section of the patent, which states: “the
 11 reduction percentage [is] based at least in part on central processing unit (CPU) usage, the system
 12 memory usage, and the bandwidth usage of physical links connected to a specific destination.”
 13 Dkt. No. 100-3 at 2:17-20. This statement distinguishes CPU *usage* and system memory usage,
 14 not CPU *memory* and system memory. The Court is not persuaded that the term “CPU usage”
 15 refers only to the amount of on-chip memory being used by the CPU, as the CPU has other major
 16 components apart from memory. See “Central processing unit (CPU),” BRITANNICA,
 17 <https://www.britannica.com/technology/central-processing-unit> (last viewed January 18, 2022).

20 If the patented technology does not distinguish between on-chip and off-chip memory, then
 21 the Court sees no reason for the distinction Defendant proposes. Accordingly, the Court adopts
 22 Plaintiff’s construction of the claim: “memory that is available to the CPU for allocation.”

23 **3. The Disputed Term: “Diameter protocol”**

24 The relevant claim states: “blocking calls routed through the gateway with respect to the
 25 reduction percentage by implementing an overload extension to the **Diameter protocol**.” Dkt.

1 No. 100-3 at ECF 15 (Claim 11D). Plaintiff argues that this term requires no construction and
 2 does not propose an alternative definition.² Dkt. No. 104 at 3. Defendant seeks to limit the
 3 definition to “[a]n industry standard AAA (authentication, authorization, and accounting) protocol
 4 that uses TCP or SCTP (and not UDP) and works on port 3868.” Dkt. No. 105 at 3.

5 The Court agrees with Plaintiff and sees no reason to further define “Diameter protocol.”
 6 A person of ordinary skill in the art would understand what Diameter protocol is, and Defendant’s
 7 proposed construction would unnecessarily limit the term before it is explained to the jury by an
 8 expert. Both parties describe Diameter protocol as a well-known industry standard for performing
 9 AAA in resource management. *E.g.*, Dkt. No. 100 at 9-10; Dkt. No. 104 at 4. Plaintiff’s patent
 10 essentially added two new features, but this well-known standard is still its core structure. As an
 11 analogy, if Plaintiff had taken the concept of a wooden wheel and added rubber to it, it would be
 12 easily recognizable as a wheel plus a new addition. Attempting to redefine “wheel” in that case
 13 would assist no one and only obscure the function of the addition.
 14

15 In addition to its being a well-known standard, Plaintiff has persuasively argued that
 16 Diameter protocol is not necessarily limited to one port and that the specification does not exclude
 17 UDP. Dkt. No. 104 at 4. Therefore, as well as creating an unnecessary complication, Defendant’s
 18 construction of the term is inaccurate and incomplete. Accordingly, the Court adopts the plain and
 19 ordinary meaning of “Diameter protocol” as it would be understood by a person of ordinary skill
 20 in the art and declines to further construe it.
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 25 ² The Court does not view Plaintiff’s statement that “[s]hould the Court find construction necessary: ‘Diameter
 protocol’” as proposing an alternative definition. Dkt. No. 104 at 3.

1 **4. The Disputed Term: “not fully connected”**

2 The relevant claim refers to the patented technology’s performance of “an audit sequence
 3 in response to a trigger[;] the audit sequence includes clearing media resource ports that are **not**
 4 **fully connected** by implementing an audit extension to a Diameter protocol.” Dkt. No. 100-3 at
 5 ECF 15 (Claim 11A). Plaintiff asserts that the plain and ordinary meaning of the term is readily
 6 apparent, and that it simply means “not fully connected” or “not correctly connected.” Dkt. No.
 7 104 at 4-6. Defendant does not present an alternative construction, but rather claims that the term
 8 is indefinite and thus that the asserted claim is invalid. Dkt. No. 105 at 4-6.

9 A patent claim specification must “conclude with one or more claims particularly pointing
 10 out and distinctly claiming the subject matter which the applicant regards as his invention.” 35
 11 U.S.C. § 112. “The Supreme Court has read this provision to require that ‘a patent’s claims,
 12 viewed in light of the specification and prosecution history, [must] inform those skilled in the art
 13 about the scope of the invention with reasonable certainty.’” *Sonix Tech. Co., Ltd. v. Publications*
 14 *Int’l, Ltd.*, 844 F.3d 1370, 1377 (2017) (quoting *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S.
 15 898, 909-10 (2014)). The Supreme Court’s *Nautilus* decision recognized the “inherent limitations
 16 of language” and that “[s]ome modicum of uncertainty” in a patent claim’s scope is unavoidable.
 17 *Nautilus*, 572 U.S. at 909. Nevertheless, “a patent must be precise enough to afford clear notice
 18 of what is claimed.” *Id.* A party claiming indefiniteness must establish it by clear and convincing
 19 evidence. *Sonix*, 844 F.3d at 1377.

20 The Court finds that Defendant has not met this standard. Defendant argues that “not fully
 21 connected” is a “term of degree” and that it is not clear what degree of connection triggers the
 22 audit sequence that is a core function of the patented technology. Dkt. No. 105 at 5. The Court,
 23 however, agrees with Plaintiff that “not fully connected,” as used in the specification, is better

understood as a binary term referring to any port that is not completely connected to the network.
 1
 2 *See* Dkt. No. 129 at 60. As Defendant's expert agreed, "not fully connected would include [things
 3 that are] not connected and things that [are] partially connected." Dkt. No. 104 at 6 (quoting
 4 deposition transcript). This statement sufficiently defines the scope of "not fully connected," and
 5 the Court finds that the term is not indefinite.

6 **B. Patent '330**

7 Patent '330 is described as "a method of generating real time billing information for a call
 8 set up between a user of [a] packet switching based network and a user of a circuit switching based
 9 network." Dkt. No. 131 at 13 (citing Dkt. No. 100-11 at ECF 2). The patented technology involves
 10 communication between the two different types of phone networks. Dkt. No. 128 at 9-10.
 11 Specifically, the technology involves communications in which a transaction is taking place in real
 12 time—e.g., when a caller is charged by the minute for an ongoing phone call. When a call is placed
 13 from a packet switching network to a phone number in a circuit switching network, a "network
 14 element" bridges the two networks. *Id.* In the context of the patented technology, the network
 15 element sends messages to a billing server that then generates real-time billing information. *Id.*
 16 The billing server uses the billing rate and the interval of billing to calculate the cost of the call
 17 while the user is still on the phone.

20 **1. The Disputed Term: "real time billing information"**

21 The relevant claim describes a system "wherein a billing server is informed of at least a
 22 billing rate and an interval of billing to generate **real time billing information**, . . . wherein the
 23 **real time billing information** is generated continuously." Dkt. No. 100-11 at ECF 13-14 (Claims
 24 1P, 10P). Plaintiff argues that the term is well understood and that no construction is necessary.
 25 During the Markman hearing, Plaintiff appeared to argue that, if construction is necessary, the

1 term should be defined as “billing information generated during a call as opposed to only at the
 2 end of a call.” *See* Dkt. No. 131 at 22. Defendant asks the Court to construe the term as “billing
 3 information generated at the same rate as the information is received.” Dkt. No. 105 at 6.

4 The Court agrees with Plaintiff. The meaning of “real time billing information” is readily
 5 apparent even to a layperson, and Defendant’s proposed definition would introduce confusing
 6 language without serving any important purpose. Plaintiff’s proposed construction of “billing
 7 information generated during a call as opposed to only at the end of a call” is not fundamentally
 8 different from Defendant’s, but it uses plain and unambiguous language. Furthermore, the phrase
 9 “during a call” is used throughout the specification and seems the most natural temporal limitation
 10 for the term “real time” in the context of this patent. *See* Dkt. No. 131 at 25. Defendant’s phrase
 11 “at the same rate” is not used in the specification and potentially introduces ambiguity, as it is not
 12 clear whether the “same rate” means “at the same speed” or “at the same time.”

13 Plaintiff’s construction avoids this ambiguity without fundamentally contradicting
 14 Defendant’s construction, and the Court therefore adopts Plaintiff’s construction: “billing
 15 information generated during a call as opposed to only at the end of a call.”

16 **C. Patent ‘940**

17 The ‘940 patent describes “a method to monitor and analyze video traffic consumed by
 18 users for the purpose of targeted content delivery.” Dkt. No. 134 at 12 (citing Dkt. No. 100-7 at
 19 ECF 2). Many websites and applications collect data about their users and then use that data to
 20 deliver targeted content, usually advertisements. Patent ‘940 deals with one type of user data:
 21 online video-watching behavior and preferences. The patented technology is a system for
 22 collecting, analyzing, and packaging user data based on what and how the user is watching online.
 23 Examples of data include the time at which a video is watched, the location of the user’s device,

1 the length of the video, and virtually any aspect of the video's content, such as genre. The patented
2 technology analyzes "traffic flows" (the communication between a user and the video source) to
3 extract and "match up" data about the video content. Traffic flows involve fragments of data
4 ("packets") that are matched up with a database of existing video data and then pieced together to
5 determine what and how the user is watching. This provides information about the user so that
6 more targeted content can be delivered.

7 **1. The Disputed Terms: "protocol signature"/ "protocol signature identifier"**

8 The relevant claim describes "[a] method of targeted content delivery in a packet-based
9 communication network in communication with a terminal device based on Internet video traffic
10 analysis, comprising: collecting, with a **protocol signature identifier**, relevant user traffic in the
11 packet-based communication network; comparing, with the **protocol signature identifier**,
12 collected traffic flows of the relevant user traffic to a set of known **protocol signatures**." Dkt.
13 No. 100-7 at ECF 13 (Claim 15A). Following guidance from the Court during the Markman
14 hearing, the parties compromised on defining "protocol signature identifier" as a "module for
15 collecting, analyzing and matching video traffic flows against a set of known protocol signatures."
16 Therefore, the only dispute is over the meaning of "protocol signature."

17 Plaintiff argues that "protocol signature" should be defined as "a pattern of data associated
18 with traffic flow(s)." Dkt. No. 132 at 31. Defendant contends that it should be defined as
19 "particular video content." Dkt. No. 105 at 7. During the Markman hearing, the Court noted that
20 both parties' proposed constructions appeared deficient. Defendant's construction, "particular
21 video content," is incorrect, because the protocol signature does not itself consist of video content.
22 Rather, the signature operates more like a fingerprint identifying pieces of video content that the
23 patented technology collects and compares against other known fingerprints. On the other hand,
24

1 Plaintiff's proposed construction, "a pattern of data associated with traffic flow(s)," is technically
2 accurate but too broad. It is clear from the language of the specification that the patented
3 technology relates only to video content, even if other content is present in the traffic flows.
4 Therefore, the Court modifies the construction of "protocol signature" to read: "a recognizable
5 pattern of data associated with video traffic flows."

6 **2. The Disputed Term: "metadata"**

7 This term is used in many claims throughout the patent. One example describes a
8 technology "using deep packet inspection (DPI) technology in a **metadata** information collector
9 to identify and extract **metadata** associated with the video content information in the packet-based
10 communication network; forwarding the extracted **metadata**; harmonizing the forwarded
11 **metadata** into a common format, wherein the common format is a hierarchy of class structure;
12 developing a user profile based on the harmonized **metadata**; and delivering targeted content
13 based on the developed user profile." Dkt. No. 100-7 at ECF 13 (Claim 15F). Plaintiff argues that
14 the term has a plain and ordinary meaning and does not require construction. However, Plaintiff
15 offers the alternative definition "data about data." Dkt. No. 104 at 7-8. Defendant urges the Court
16 to adopt the narrower definition "[i]nformation that accompanies and describes video content."
17 Dkt. No. 105 at 8.

20 The Court is persuaded that metadata is a well-known term that a person of ordinary skill
21 in the art would readily understand. Additionally, Plaintiff's proposal, "data about data," is more
22 in line with how the term is widely understood. Defendant's proposed construction is not
23 necessarily inaccurate, but the Court sees no reason to restrict metadata to "video content" when
24 the plain meaning of metadata includes data that may not be directly related to video content.
25 Therefore, the Court finds that Plaintiff's proposed construction, "data about data," is more

1 appropriate.

2 **3. The Disputed Term: “a user profile”**

3 The relevant claim describes a technology that “develop[s] a **user profile** based on the
 4 harmonized metadata; and deliver[s] targeted content based on the developed **user profile**.” Dkt.
 5 No. 100-7 at ECF 13 (Claim 15I). Plaintiff defines the term as “[a] unique formulation of various
 6 information related to a user.” Dkt. No. 104 at 8. Defendant defines it as “[a] [u]nique formulation
 7 of behavior information of a user.” Dkt. No. 105 at 8-9.

8 The parties’ constructions are virtually the same except for the word “behavior.”
 9 Defendant claims that all of the information collected by the patented technology is behavioral, as
 10 opposed to “static” information about the user. *See* Dkt. No. 105 at 8-9. However, the distinction
 11 proffered by Defendant is not present in the patent and is improperly restrictive. The specification
 12 explicitly contemplates the collection of “demographic and/or behavioral information.” Dkt. No.
 13 132 at 51. Demographic information like race, location, and age is not behavioral, and it would
 14 be improper to define “a user profile” in way that would exclude this information. Therefore, the
 15 Court adopts Plaintiff’s construction of the term.

16 **4. The Disputed Term: “hierarchy of class structure”**

17 The relevant claim describes the technology’s function of “harmonizing the forwarded
 18 metadata into a common format, wherein the common format is a **hierarchy of class structure**.”
 19 Dkt. No. 100-7 at ECF 13 (Claim 15H). Plaintiff argues that the term does not require construction,
 20 but that if the Court finds construction necessary, it should be defined simply as a “schema.” Dkt.
 21 No. 104 at 8. Defendant proposes that the term be defined as “[a] specified order of attributes into
 22 a tree structure with branches.” Dkt. No. 105 at 9.

23 Defendant’s proposed construction comes from the Microsoft Computer Dictionary. *See*

1 Dkt. No. 127 at 49. Although this may be an authoritative source in some instances, Defendant
2 fails to draw any connection in this instance between the definition and the language of the claims
3 in this patent. The patent language never mentions a tree structure or branches, nor does it imply
4 this type of organization. The claim language states: “[e]xamples of a form of schema include
5 those containing a year, a genre, a rating, a production house, a lead actor, a lead actress, a suitable
6 audience, and so on.” *Id.* at 48. Nothing in this language implies any particular structure, let alone
7 Defendant’s tree and branch concept.

8 At the same time, the Court finds Plaintiff’s proposed definition, “schema,” too vague to
9 be useful. The Court finds instead that “hierarchy of class structure,” by the plain language of the
10 claim, is “a common format in which metadata is harmonized.”

12 **5. The Disputed Term: “deep packet inspection”**

13 The relevant claim describes a technology “using **deep packet inspection (DPI)**
14 technology in a metadata information collector to identify and extract metadata associated with the
15 video content information in the packet-based communication network.” Dkt. No. 100-7 at ECF
16 13 (Claim 15F). Plaintiff defines this term as “inspecting header information and at least one other
17 piece of information of a packet.” Dkt. No. 104 at 9-10. Defendant contends that the term should
18 mean “examining the full content of a packet.” Dkt. No. 105 at 10-11.

20 The parties’ definitions represent a distinction without a difference. Plaintiff convincingly
21 argues that DPI involves examining the contents of a packet—i.e., going deeper than the
22 identifying header—but that it does not necessarily involve examining *all* contents of the packet.
23 Dkt. No. 132 at 68-69. Defense counsel stated during the Markman hearing that its proposed
24 construction was intended to illustrate that DPI is “capable” of examining the entire contents of a
25 packet. However, Defendant’s proposed construction, “examining the full content of a packet,”

1 goes beyond capability and implies that DPI necessarily means examining the full packet. The
2 Court will not adopt this restrictive definition and instead finds that Plaintiff's proposal,
3 "inspecting header information and at least one other piece of information of a packet," accurately
4 describes DPI.

5 **D. Patent '945**

6 Patent '945 is described as "[a] [s]ystem, apparatus, and method using a master device in
7 a cluster of devices to select a network device to respond to a DNS query." Dkt. No. 134 at 3
8 (citing Dkt. No. 100-9 at ECF 2). Every device connected to the internet has a unique IP address—
9 a complicated numerical sequence—that identifies it to other devices. Devices include personal
10 cell phones and computers, as well as email and web servers that personal devices must contact in
11 order to interact with their email or a website.

12 A domain name service ("DNS") allows users to connect (i.e., query) to a particular site on
13 the internet by simply typing in the domain name (e.g., CNN.com) rather than the specific
14 numerical IP address of the server the user's device needs to contact.

15 Large networks, such as popular websites, require more than one server to handle the
16 volume of queries they receive. When there is a "cluster" of multiple servers, there must be a
17 system for efficiently assigning queries to the server that is best equipped to handle them at the
18 time the queries are received—a process known as "load balancing"—so that no one server
19 becomes overloaded. An Authoritative Name Server ("ANS") is a device that performs this
20 function. When it receives DNS queries, it assigns them to the other servers. The patented
21 technology before the Court was designed as a modification and improvement of the existing
22 system. Instead of designating a single, separate device to permanently serve as the ANS, the
23 patented technology allows any device in the cluster to serve as a "master device" as needed.
24
25

1 Additionally, the patented technology claims to enhance the communication between the master
2 and other devices, with the latter sending status information to the master device in real time. The
3 master device can then make more informed decisions in executing its load-balancing function.

4 **1. The Disputed Term: “a master device”**

5 The relevant claim states: “[a] system comprising: a plurality of network devices grouped
6 in a cluster, wherein each network device has a different respective device internet protocol (IP)
7 address; wherein one of the network devices is designated as **a master device**.” Dkt. No. 100-9
8 at ECF 9-10 (Claims 1A, 6B, 12A). Plaintiff defines the term as “a device in a cluster that is
9 configured to select other device(s) at a given time.” *See* Dkt. No. 134 at 34. Defendant counters
10 with its own proposed construction: “a single network device controlling the other devices in the
11 same cluster.” Dkt. No. 105 at 11. The parties thus disagree on whether the term should be defined
12 as a “single device” or simply “a device,” and whether the device “selects” or “controls” the other
13 devices.

14 The Court agrees with Plaintiff’s definition on both points. While Defendant is correct that
15 the patented technology contemplates there being only one master device in a cluster at a given
16 time, any device in the cluster can serve as the master device, and the device playing the master
17 role may change as needed. This flexibility and interchangeability is among the patented
18 technology’s intended improvements upon the prior art, in which only one device, separate from
19 the others in the cluster, served as the ANS. *See* Dkt. No. 134 at 19. Defendant’s proposed use of
20 “a single network device” seems more aptly to describe the prior art than the patented technology.
21 Furthermore, Plaintiff’s use of the phrase “at a given time” makes clear that there is only one
22 master at a time, and the plain and ordinary meaning of the word “master” makes it clearer still.

23 As to the second point, Defendant’s use of the word “controls” is misleading. The function

1 of the master device is to select another device to handle a query. Although the master device does
2 indeed “control” this selection process, as Defendant argues, it does not control the other devices.
3 *See* Dkt. No. 127 at 57. If the selection of a device is the only thing the master controls, then
4 Plaintiff’s choice of the word “selects” is clearly more precise. Accordingly, the Court adopts
5 Plaintiff’s construction.

6 **2. The Disputed Term: “an authoritative domain name server”**

7 The relevant claim describes a system in which “the master device is assigned an IP address
8 corresponding to an IP address of an **authoritative domain name server.**” Dkt. No. 100-9 at ECF
9 9-10 (Claims 1B, 6B, 12A). Plaintiff proposes that this term be defined as “a domain name service
10 (DNS) server that can answer DNS queries without needing to query other DNS servers.” Dkt.
11 No. 104 at 11; Dkt. No. 134 at 43. Defendant urges the Court to define the term as “[a] domain
12 name service server responsible for resolving names and IP address at a particular level.” Dkt.
13 No. 105 at 11-12.

14 The parties’ primary dispute is over Defendant’s use of the phrase “at a particular level.”
15 The Court is persuaded by Plaintiff’s observation that Defendant’s limitation of the authoritative
16 domain name server’s function to a particular level is founded on a single embodiment in the
17 specification. *See* Dkt. No. 134 at 45. That embodiment describes a hypothetical “system [that]
18 may also comprise a separate ANS for a higher level domain.” *Id.* The Court agrees with Plaintiff
19 that this is merely an example of how the technology could be implemented, not how it necessarily
20 must be implemented.

21 Accordingly, the Court adopts Plaintiff’s construction: “a domain name service (DNS)
22 server that can answer DNS queries without needing to query other DNS servers.”
23

1 **3. The Disputed Term: “a predefined load balancing algorithm”**

2 The relevant claim states: “the master device selects one of the network devices according
3 **to a predefined load balancing algorithm.**” Dkt. No. 100-9 at ECF 10 (Claims 3, 8, 14). Plaintiff
4 argues that this term has a plain and ordinary meaning and does not require construction. Dkt. No.
5 104 at 12. Defendant does not propose its own construction but claims the term is indefinite. Dkt.
6 No. 105 at 12.

7 Defendant’s argument appears to center on the word “predefined.” *See id.*; Dkt. No. 100
8 at 23. During the Markman hearing, Defendant asserted that the meaning of the term hinged on
9 whether “predefined” modifies “load balancing” or “algorithm,” and that the apparent lack of
10 clarity creates an indefiniteness issue. *See* Dkt. No. 100 at 23. The Court agrees with Plaintiff that
11 this dissection of the term is unhelpful in determining indefiniteness and that, in any event,
12 “predefined” plainly modifies the whole phrase “load balancing algorithm.” Furthermore, Plaintiff
13 has persuasively argued that the patent need not explain how to write or implement a load
14 balancing algorithm to satisfy the definiteness requirement. *See* Dkt. No. 134 at 55. Both parties
15 and their experts seem to agree that a number of different algorithms can be loaded into the system,
16 and that the system will perform its load-balancing function according to the particular algorithm
17 chosen. *See* Dkt. No. 127 at 61; Dkt. No. 134 at 52.

20 In summary, the scope of this term is straightforward, and the Court finds that Defendant
21 has not presented clear and convincingly evidence that “predefined load balancing algorithm” is
22 indefinite.

V. CONCLUSION

For the foregoing reasons, the Court adopts the claim constructions as set forth above.

DATED this 28th day of January, 2022.

Barbara J. Rothstein
BARBARA J. ROTHSTEIN
UNITED STATES DISTRICT JUDGE